



The Aeronautical Newsletter of the Seattle Flight Standards District Office

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PRACTICAL DENSITY ALTITUDE

We continue with the Deadly Sins of Density Altitude as identified by Kurt Anderson, National Transportation Safety Board accident investigator. With 15 years of aircraft accident investigation within the 7 Northwestern states, Kurt has interviewed numerous pilots who have survived density altitude accidents in an effort to determine just which mental mistakes they made that lead to their accidents. Here is **Deadly Sin number 7 – Not knowing the aircraft's takeoff and initial climb out performance numbers.**

Manufacturers give us performance charts to figure required runway length to get off the ground, and distance required to out climb obstacles. They take into consideration such things as airport elevation, temperature, headwind component, and type of runway surface.

Just imagine you wanted to depart a dirt strip with a 2 degree upslope, a 100 foot tree at the far end, at a pressure altitude of 6,700 feet msl, at a gross weight of 2,180 pounds, with a 3 knot headwind, on an 80 degree day. Could you go to those performance charts and accurately determine the takeoff distance and distance required to clear the tree? For most pilots (including your AeroSafe staff) the answer is "no"!

The charts work great – if you have a Masters Degree in Mathematics. The problem is that the mathematical formulas required to ascertain the performance values for a specific aircraft at a specific airport on a specific day are cumbersome to say the least.

So, far too often, pilots give up on the charts, and take a guess at the answers to those questions (and we pilots are notoriously optimistic). The problem is that your very life and the lives of any passengers depend upon accurate answers to those questions. Wouldn't it be great if there was a simple, easy to use device that would quickly help you ascertain the answers?

Well there is one. And we know of only one. It's a takeoff performance computer and it's available at your favorite aviation mail order store. It's non-technical and requires no batteries. It looks like a slide rule with seven slides, and it will give you accurate answers to all of the above questions and more.

Thanks Kurt.

SAY IT ISN'T TRUE

It seems there is considerable debate over whether ASOS/AWOS winds are reported in degrees from true north or from magnetic north. We can see why there is confusion. Some FAA documents say the winds are reported in degrees magnetic, while

other FAA documents say the winds are reported in degrees true. It seems this is one case where you can have your cake and eat it too – because ASOS/AWOS winds actually are reported both ways!

It's really not as confusing as it might seem. You see, ASOS/AWOS stations send the information to two different sources – via radio broadcast to pilots, and via land lines to the Meteorologists for their written reports. Pilots need the wind information in degrees from magnetic north. So, in radio broadcasts to pilots the winds are always reported in degrees magnetic. For some unexplainable reason, the Meteorologists want the winds recorded in degrees from true north. So, when the ASOS/AWOS stations send the reports via the land lines, they send the winds in degrees true.

So, the next time you see an FAA document that says ASOS/AWOS winds are reported in degrees from true north, realize that the document was prepared for meteorologists, not pilots.

By the way, when a Control Tower, ATIS or Flight Service Station reads the winds to you, those winds are also given in degrees magnetic.

LOOKING FOR A WINNER

We have all had a flight instructor who got us started, and maintenance technicians who keep our aircraft

airworthy. If you have one or more who has done a great job, the time has come to nominate them for CFI of the Year and/or Maintenance Technician of the Year. Local winners will be selected from western Washington State, with the awards presentations being made at the Northwest Aviation Conference in February. The winning local entries will compete with entries from the seven northwestern states to select a regional winner. The winning regional entries will be forwarded to select national winners. National winners receive merchandise and monetary gifts and an all expense paid trip to Nashville, TN to be recognized at the Women in Aviation International Convention March 13 to 15, 2002.

The process is simple. No later than November 1, 2001, submit a nomination package to Scott Gardiner at the Seattle Flight Standards District Office. The package should include a resume of the applicant's professional accomplishments, an essay (1,000 words or less) explaining why your applicant is deserving of this award, letters of recommendation pertinent to the type of award, and supporting documentation such as magazine, newsletter, and newspaper articles, etc. (a maximum of ten).

VFR FLIGHT FOLLOWING

Our air traffic control friends ask a favor from pilots of VFR aircraft utilizing Flight Following services. **"Please, before departing the frequency, inform the controller you are terminating services"**.

Many pilots apparently think that making a radio call just to report that the pilot is terminating Flight Following services would be an undesirable additional workload for a controller who is already busy with the respon-

sibility of numerous IFR aircraft. So, they just quietly leave the frequency. Believe us, calling to terminate services is **NEVER** considered an unwelcome workload to any controller, anywhere, ever. In fact, what **is** considered an unwelcome workload is **not** reporting the termination of services. You see, an aircraft on Flight Following services, who without explanation, suddenly leaves the frequency never to be heard from again is automatically considered to have crashed. Now the controller has to initiate Search and Rescue procedures. This is a **BIG** increase in controller workload.

So, the next time you terminate ATC services, be sure to bother the controllers and let them know before you switch frequencies. You'll make their day.

CLOSE CALL

Imagine Boeing Field is using runways 13 and you are departing VFR with the intention of flying northwest, perhaps to Port Angeles. It is logical to make a down wind departure, hugging the shoreline west of downtown Seattle. Then fly over the VFR reporting point known as West Point, gaining as much altitude as possible. The floor of Bravo Airspace is 3,000 feet so you're probably about 2,500 feet MSL as you head out over Puget Sound.

But remember that the active runway is 13. This means that a whole lot of airplanes, both VFR and IFR are approaching West Point for landing at Boeing Field, and they're at the same altitudes you are using!!! Aircraft flying the ILS instrument approach to 13 cross West Point at about 2,500 feet descending!

The people at Seattle Approach Control send you this friendly reminder because, to be perfectly hon-

est, they are seeing to-o-o-o-o-o-o many close calls between IFR arrivals and VFR departures at this point. Ya'll be careful.

PLEASE CLOSE THAT FLIGHT PLAN

One more request from Seattle Approach Control, "When on an IFR flight plan, on vectors to an airport that does not have an instrument approach, would you **PLEASE** cancel your flight plan before descending to land at the airport. Too often controllers give instructions like, "Report airport in sight, report cancellation on this frequency, maintain 2,000 feet". Then the airplane disappears from the radar screen without a word. Just like the VFR flight following aircraft that left the frequency without terminating services, this one requires controllers to initiate search and rescue operations. Please, **please, please** cancel that IFR flight plan before descending to land in visual conditions.

CALLBACK

NASA has a wonderful incident reporting system called the Aviation Safety Reporting System (ASRS). ASRS allows pilots to report safety problems so that all can learn about them and, when appropriate, measures can be taken to fix the problems.

ADDRESS CHANGE?

The address list is stored in a BIG computer at the Home Office in Oklahoma City. They are the ones to notify of any address changes so we can continue to bring you AeroSafe and other good stuff.

FAA Airman Certification Branch
Box 25082
Oklahoma City, OK 73125

NASA compiles the reports and posts many to their Home Page at:

<http://asrs.arc.nasa.gov>

They also publish many in a free newsletter they call *Callback*. You can subscribe by writing their Home Page, or NASA Aviation Safety Reporting System, PO Box 189, Moffett Field, CA 94035-0189. There is no charge for the newsletter.

The following are stories from *Callback*.

FLIGHT FOLLOWING?

An ATC radar controller writes, "A Boeing 727 airliner made a straight-out departure to the northwest from ABC airport with instructions to climb and maintain 3,000 feet MSL. The air carrier checked in with Departure Control, was instructed to climb and maintain 8,000 and to turn left to heading 240. I had been watching a primary target (no transponder) for a few miles and the target was now 6 nautical miles due west of the air carrier's departure airport, headed east bound. Air carrier X was issued the traffic as "type and altitude unknown" and was instructed to disregard the left turn and to remain on runway heading. The pilot responded that they were on heading 270 and asked if that would be OK. I realized that 270 would be too close to the primary target and turned the air carrier back to 290. Air carrier X then reported the traffic in sight less than one half mile, "heading right at us at our altitude" (4000 feet).

We tracked the primary target to a small airport. Before landing, the pilot asked Approach Control for a transponder check (his first contact with ATC since departing an airport in another state). Later, the pilot called Approach Control on the phone and said he was monitoring the frequency and "thought you might be talking about me after I saw

the 727 go by." Why the pilot monitored the frequency and never called us is beyond me. If he had, we could have avoided a near mid-air collision. If the ATC service is there for free, use it! It's less work on the controllers to work VFR aircraft on Flight Following than to constantly be issuing traffic as "type and altitude unknown."

Your AeroSafe staff urges all pilots to utilize Flight Following services. If you are not trained in the communication procedures and phraseology, find an instructor to show you. Finding the correct frequency for Flight Following can be a challenge if you do not have access to instrument procedures charts. If you are departing from a tower controlled airport, notify the controller of your direction of flight and ask for a frequency for Flight Following in that area (leaving Delta Airspace is a good time for this). Otherwise, call any Flight Service Station, notify them of your location, altitude, and direction of flight, and they will provide you with a frequency.

OOPS

Another *Callback* reader writes, "I was enroute and intended to utilize the GPS approach. After loading the approach into my IFR-certified GPS unit, I decided to head direct to the XYZ GPS fix. I thought that the XYZ fix was the same place as the XYZ airport. Unfortunately, the fix was actually northwest of the airport. My path took me directly over a Restricted Area. Since I was descending for the GPS approach I possibly broke the 2,999 foot MSL ceiling of the Restricted Area".

Callback replied, "ASRS frequently hears from pilots who "go direct" with GPS and neglect other flight planning. A quick look at a VFR chart, low altitude IFR chart, or the

airport GPS approach plate would have helped this pilot differentiate between the location of the GPS fix and the airport location. The use of flight following, even with no flight plan filed might also have prevented the airspace violation."

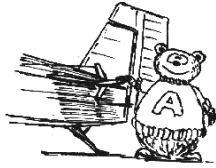
While GPS is amazing technology with unlimited capabilities and is clearly here to stay, your AeroSafe staff has just one concern – that GPS is entirely too fascinating. Pilots we've flown with are spending far too much time staring at the GPS unit and far too little time scanning outside for traffic. We have begun referring to GPS as a "Heads Down Display".

OREGON AIR FAIR

The Oregon Air Fair is coming to the Albany, Oregon Convention Center September 15 and 16. The event would remind you of our Northwest Aviation Conference with its trade show, aircraft displays, and seminars, seminars, seminars. The Albany Convention Center is conveniently located at the north end of the Albany Airport. Hours are 9:00 am to 5:00 pm on Saturday and 9:00 am to 4:00 pm on Sunday. Featured speakers include (but are not limited to) Capt. Al Haynes, who, for 45 minutes, flew the ill fated DC-10 with no flight controls except engine power before crashing at Sioux City, Iowa in 1988, and Dr. Jerry Cockrell, aviation educator and humorist. For further info contact Gordon Reed, Hillsboro, Oregon FSDO at 503-681-5541.

**Noise Annoys
Please do what you can**

AEROSAFE



May you always find VFR and tailwinds.